

REMARKS

This Amendment is intended as a full and complete response to the non-final Office Action dated February 22, 2006. In the Office Action, the Examiner states that claims 1-17 are pending and stand rejected. By this Amendment, claims 1, 9, 10 and 12 have been amended, new claim 18 has been added, and claims 2-8, 11 and 13-17 continue unamended.

In view of both the amendments presented above and the following discussion, the Applicants submit that none of the claims now pending in the application are anticipated or obvious under the provisions of 35 U.S.C. § 102 and § 103. Thus, the Applicants believe that all of these claims are now in allowable form.

IN THE SPECIFICATION:

The specification has been amended to provide minor grammatical corrections. Such grammatical corrections do not add any new subject matter to the application.

Rejections

A. 35 U.S.C. § 112

In the Office Action, Claims 1-17 stand rejected under 35 U.S.C. §112 as failing to comply with the enablement requirement. The rejection is respectfully traversed.

It is submitted that the specification provides details to enable a person skilled in the art to understand the exchange of information, i.e., communications, between the propellant holder and the setting tool. In particular, a data storage indicator unit of the propellant holder can be a device such as a magnetic strip 44 or EEPROM 45, which is well known to a person skilled in the art for storing information. These storage devices are commonly used, for example, on credit cards, telephone cards among other electronic devices. The data storage indicator unit (40) is specifically designed to store information that can be read by another device, e.g., a data processing unit (e.g., magnetic card reader), as conventionally known in the art.

The magnetic strip or EEPROM, i.e., the data storage identification unit, is affixed to the propellant holder during manufacture, and includes (i.e., stores) (i) propellant identification information and (ii) supply level data (see specification, page 11, lines 7-14). Thus, in one embodiment, the data storage identification unit stores the current propellant level prior to the time the propellant holder is installed in the setting tool.

After the propellant holder 20 has been inserted into the receptacle 15 of the setting tool 10, the identification data and the propellant supply level information are transferred from the magnetic strip 44 or the data storage identification unit 40, via the data communication interface 31 or the magnetic strip reader 34, to the data processing unit 30.

If the identification data are recognized as acceptable data, and the propellant supply level indicates that at least one solid propellant charge remains in the propellant holder 20, the data processing unit 30, which can be formed, *e.g.*, as a microprocessor or an integrated circuit, puts the setting tool 10 in an operational mode. The propellant supply level 27 is displayed on the display 50. Upon a solid propellant charge 25 being consumed, the data processing unit 30 changes the propellant supply level 27 in the data storage identification unit 40 via the data communication interface 31, so that the data storage identification unit 40 always stores the actual propellant supply level 27. (see specification page 12, lines 3-16, emphasis added).

Thus, the data storage identification unit (40) is a memory device that stores a quantitative value associated with the level of propellant contained in the propellant holder. The propellant is consumed each time the trigger of the setting tool is actuated in a well known manner. As the propellant in the holder is consumed (*e.g.*, each time a nail is fired from the tool), the data processing unit (30) of the setting tool monitors the triggering and rewrites the data that is stored in the data storage identification unit (40) to the new quantitative level (27), which is displayed on the display (50).

Moreover, when the propellant is a liquid or gaseous fluid, one skilled in the art would understand without undue experimentation that a similar exchange of information

between the data processing unit 30 of the setting tool and the data storage identification unit (40) of the propellant holder is provided via the transponder antennas (32 and 42) each time the setting tool is fired (i.e., actuated).

Therefore, it is submitted that claims 1-18 do comply with the enablement requirement under 35 U.S.C. § 112 and are fully patentable thereunder. Withdrawal of the rejection is respectfully requested.

B. 35 U.S.C. § 102

Claims 1-3, 6, 7, 10-13 and 15-17 stand rejected under 35 U.S.C. §102 as being anticipated by US Patent No. 6,247,626 to MacVicar. The rejection is respectfully traversed.

Independent claim 1, as amended, recites:

A propellant holder for being releasably mounted in a setting tool having a data communication interface (31), said propellant holder comprising a housing (21) having an interior space (22) for receiving propellant (23); and a data storage identification unit (40) affixed to said housing (21) and in which a propellant supply level (27) is stored for being read-out by the data communication interface (31) of the setting tool. (emphasis added).

Independent claim 10, as amended, (and similarly, independent claim 17) recites:

An explosion-driven setting tool, comprising a setting mechanism (12) driven by a propellant (23); ignition means (18) for igniting the propellant (23); a receptacle (15) for receiving a propellant holder (20) having a data storage identification unit (40); a display (50) for displaying a propellant supply level (27) in the propellant holder (20); a data communication interface (31) for receiving and transmitting data with the data storage identification unit (40) of the propellant holder (20); and a data processing unit (30) operationally connected with the data communication interface (31) and the display (50). (emphasis added).

As a preliminary matter, we believe that it would be helpful to review the appropriate standard under 35 U.S.C. § 102 for analyzing the features of a claim with respect to the prior art. It is well settled that “[a]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention,

arranged as in the claim” (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). The MacVicar patent fails to disclose each and every element of the claimed invention, as arranged in the claim.

The MacVicar patent discloses:

“To provide correct sequencing and timing of the afore-described operation of the tool, e.g., the length of time the metering valve is left open, the generation of the spark for ignition, and the scavenging of combustion byproducts from the combustion chamber, a control circuit is provided that controls the operation of the tool, specifically the admission of fuel to the combustion chamber, generation of the ignition spark, rotation of the exhaust valve (in the solenoid-controlled version), and operation of the fans. In one embodiment, the control circuit is comprised of a digital logic integrated circuit with spark, fuel and fan control phases, shown generally as part of the tool at 90. This circuit may be a separate hard-wired circuit, either conventional or integrated, or part of a programmable microprocessor that achieves the same function.” (see MacVicar, col. 10, lines 31-46, underlined emphasis added).

In particular,

“in an alternate embodiment for a control system, shown in general in FIG. 23, includes a microprocessor 300 for receiving input signals and providing output signals. The microprocessor controls all operations in response to signals received and predetermined operating parameters. The input signals are provided by a variety of condition, safety, and user related sensors or inputs. The output signals are provided by the microprocessor to control functions of the fastener driver tool such as ignition, fuel control, safety interlocks, user interface, and the like, as discussed in more detail below. The microprocessor 300 of the present embodiment preferably includes programmable memory and is programmed to control several aspects of a fastener driving tool.” (see MacVicar, col. 14, lines 26-41).

The control circuit 90, which in one embodiment of Mac Vicar includes the microprocessor 300, is a component of the internal combustion powered tool, as opposed to being a component of the propellant holder. That is, the MacVicar patent is directed to controlling various parameters of the tool by including a control circuit, such as microprocessor 300, as component of the tool, as opposed to being a component of the propellant holder.

The microprocessor 300 receives inputs from various input devices of the power tool, such a pressure sensor. In particular,

“Referring back to FIG. 23, microprocessor 300 may receive input signals from a fuel pressure sensor, a temperature sensor, an ambient pressure sensor, a working surface temperature sensor, an ignition switch assembly, a jam detector, a magazine content switch or sensor, a CPU power supply, and/or a power relay.” (see MacVicar, col. 16, lines 53-58).

By contrast, the Applicants’ invention provides that the propellant holder includes a housing for facilitating a propellant, and “a data storage identification unit (40) affixed to said housing.” Although the Applicants’ tool and the MacVicar tool both include a propellant holder for facilitating a propellant for firing the tool, the Applicants’ invention differs from the teachings of the MacVicar patent, since the Applicants’ invention is a propellant holder which includes a data storage identification unit (40) that is affixed to its housing.

Nowhere in the MacVicar patent is there any teaching or suggestion of a data storage identification unit (40) affixed to said housing of the propellant holder. Rather, the control circuit 90 (i.e., microprocessor 300) is a component of the MacVicar tool, as opposed to being a component of the propellant holder. That is, the MacVicar patent fails to teach, or even suggest a sensor or any other quantitative device (i.e., a data storage identification unit) as being a component of the propellant holder. Therefore, the MacVicar patent fails to disclose each and every element of the claimed invention, as arranged in the claim.

As such, it is submitted that independent claim 1, and similarly, independent claims 10 and 17 are not anticipated and fully satisfy 35 U.S.C. §102 and are patentable thereunder. Furthermore, claims 2, 3, 6, 7, 11-13, 15, 16 and 18 depend, either directly or indirectly, from independent claims 1 and 10 and recite additional features of the invention. It is noted that dependent claim 8 also depends from claim 1, but was not addressed in this Office Action. For the sake of ensuring a complete response and proper review of all the dependent claims under the §102 rejection, it is submitted that for at least the same reasons discussed above, all of these dependent claims, including claim 8, fully satisfy the requirements under 35 U.S.C. §102 and are patentable thereunder. Therefore, it is respectfully requested that the claim rejections be withdrawn.

C. 35 U.S.C. § 103

Claims 4, 5 and 14 stand rejected under 35 U.S.C. §103 as being obvious over US Patent No. 6,247,626 to MacVicar in view of US Publication No. 2001/0045892 to Thomas et al (hereinafter “Thomas”). The rejection is respectfully traversed.

Dependent claims 4, 5 and 14 are directed to further defining the data communication interface as being formed by an antenna. These dependent claims include all of the limitations of their respective independent claims and any intermediate dependent claims. For example, dependent claim 4 recites:

"A propellant holder according to Claim 2, wherein the data communication interface (41) is formed as an antenna."

As a preliminary matter, we believe that it would be helpful to review the appropriate standard under 35 U.S.C. § 103 for analyzing the features of a claim with respect to the prior art. It is well settled that [t]he test under 35 U.S.C. § 103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 USPQ 1021, 1024 (Fed. Cir. 1984) (emphasis added). The combination of MacVicar and Thomas fails to teach or suggest the Applicant's invention as a whole.

As discussed above, MacVicar discloses an internal combustion powered tool that includes a control circuit, such as a microprocessor, for controlling various parameters of the power tool. The control circuit is a component of the tool, as opposed to being a component of the propellant holder. Nowhere in the MacVicar patent is there any teaching or suggestion of the claimed feature “a data storage identification unit (40) affixed to said housing (21) and in which a propellant supply level (27) is stored for being read-out by the data communication interface (31) of the setting tool.”

Furthermore, the Thomas patent fails to bridge the substantial gap as between the MacVicar patent and the Applicant's invention. In particular, Thomas discloses a wireless gauge alert system having a remote assembly and a receiver unit. The remote assembly includes a pressure gauge, transmitter and antenna for transmitting wireless signals indicating pressure readings to the receiver unit. (See Thomas, Abstract and page 2, paragraph 0031 and FIGS. 1-5).

The Thomas patent fails to teach or suggest that the data storage identification unit (40) is affixed to the housing of the propellant holder. Rather, Thomas merely discloses that a fuel level detector that includes an output member, a linkage arm assembly, lever arm, buoy and counter balance are attached to a fuel tank. (see Thomas, page 2, paragraph 0023). It is important to note that the measuring device of the Thomas patent is not the same as the data storage identification unit (40) of the Applicants' invention.

In particular, the measuring device of Thomas is an analog device that includes a buoy which floats on the surface of the liquid fluid, and moves up and down as the fluid in the tank is either increased or consumed. The buoy is connected to the linking arm that interfaces with the fuel gauge. By contrast, the Applicants data storage identification unit is a memory device that stores (i) identification information about the propellant, such as the type of propellant, and (ii) supply level data.

Even if the two patents could somehow be operably combined (and the Applicant submits that the two patents cannot be operably combined, since the measuring device 24 of Thomas cannot be operably incorporated into or used with the power tool of MacVicar), the combination of MacVicker and Thomas fails to teach or suggest "a propellant holder adapted for being removably installed in said setting tool" and "a data storage identification unit (40) affixed to said housing (21)." Accordingly, the combination of the cited patents fails to teach or suggest the Applicant's invention as a whole.

As such, the Applicant submit that dependent claims 4, 5 and 14 are not obvious and fully satisfy 35 U.S.C. §103 and are patentable thereunder. Therefore, it is respectfully requested that the claim rejections be withdrawn.

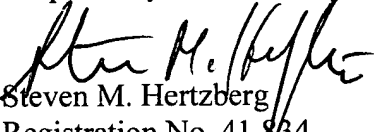
CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance, and allowance of the application is respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place the case in condition for final allowance, it is respectfully requested that such amendment or correction be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned at (212) 885-9223 so that the appropriate arrangements can be made for resolving such issues as expeditiously as possible.

The Commissioner is hereby authorized to charge any fees, or to credit any overpayment, due by reason of this Amendment to Deposit Account No. 01-0035.

Respectfully submitted,


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